

Notice of Allowability

Application No.

10/812,798

Examiner

James P. Hughes

Applicant(s)

STEVENS ET AL.

Art Unit

2883

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed on 12-12-06.
2. ☒ The allowed claim(s) is/are 1-7, 9-27, 29 and 30.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see pages 14-20, filed December 12, 2006, with respect to the rejections of claims 1-4, 5-7, 9-27, and 29-30 have been fully considered and are persuasive. The rejections of the claims have been withdrawn. Applicant's argument that the amended claims are differentiated from the prior art of record does not teach a translucent body having a flat top surface, a flat end surface, and a cylindrical shaped body for rotationally aligning the translucent body at a desired angular position and similar recitations.
2. It is noted that Applicant has a typographical error on page 15 of the arguments, which cancels claim 4. Claim 4 is fully presented on page 14 and Applicant argues for allowance of claim 4 on page 12. Claim 4 on page 14 is allowed as discussed below.

Allowable Subject Matter

3. The following is an examiner's statement of reasons for allowance. Independent claims 1 and 9 are allowed because the prior art of record does not teach an optical coupling element comprising: a translucent body having a flat top surface, a flat end surface, and a cylindrical shaped body for rotationally aligning the translucent body at a desired angular position; in combination with the other recited limitations in the claim. Claims 2-7 are allowed by virtue of their dependence on claim 1.

Claim 10 is allowed because the prior art of record does not teach a multi-layer device comprising: a flat top surface, a flat end surface, and a solid cylindrical shaped body for

Art Unit: 2883

rotationally aligning the optical coupling elements at a desired angular position; in combination with the other recited limitations in the claim. Claims 11-16 are allowed by virtue of their dependence on claim 1.

Claim 17 is allowed because the prior art of record does not teach a method of forming a light conducting path between at least two substrates comprising; extending a cylindrical shaped optical coupling element having a flat top surface and a flat end surface into the via to permit a light signal to be transferred between adjacent substrates through the optical coupling element; in combination with the other recitations in the claim. Claims 18-25 are allowed by virtue of their dependence on claim 17.

Claim 26 is allowed because the prior art of record does not teach a substrate comprising; two cylindrical shaped optical coupling elements each having a flat top surface and a flat end surface with the optical coupling members stacked in an end-to-end condition with at least one of said optical coupling elements; at least one of said optical coupling elements having an entry/exit face position ed at the second level of the substrate to permit a light signal transfer; in combination with the other recitations in the claim. Claim 27 is allowed by virtue of its dependence on claim 26.

Claim 29 is allowed because the prior art of record does not teach a substrate comprising; a cylindrical shaped translucent body for rotationally aligning the optical coupling elements at a desired angular position, said translucent body having a flat top surface, a flat end surface and an entry/exit face position ed at the second level of the substrate to permit a light signal transfer; in combination with the other recited limitations in the claim.

Art Unit: 2883

Claim 30 is allowed because the prior art of record does not teach an optical coupling element comprising; a solid cylindrical shaped translucent body having a flat top surface and a flat end surface; and means within said translucent body for directing a light signal from said first entry/exit face to said second entry/exit face or vice versa; in combination with the other limitations recited in the claim. The recitation of “means ... for directing a light signal” is interpreted under 35 USC 112th paragraph. There is sufficient structure in the specification (e.g. Figs. 1-4 and paragraphs 20-21 and 28-32 of the pre-grant publication) to set forth a “mean plus function” recitation.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The invention of Basu 5,039,192 teaches are related circular interconnection means.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to James P. Hughes whose telephone number is 571-272-2474. The examiner can normally be reached on Monday - Friday 9am - 5pm.

Art Unit: 2883

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font can be reached on 571-272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

James P. Hughes
Patent Examiner
Art Unit 2883



Frank G. Font
Supervisory Patent Examiner
Technology Center 2800